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Public Service Commission of Delaware
Docket No. 17-1094

In the Matter of:

DELMARVA POWER & LIGHT COMPANY'S APPLICATION FOR
APPROVAL OF A VOLUNTARY PROGRAM FOR PLUG IN VEHICLE CHARGING

To the Commission:

After reviewing Docket No. 17-1094, we ask the Commission to approve Delmarva's proposed electric vehicle pilot program.

Electric vehicles are coming: Bloomberg predicts that before 2030 they will be cheaper than gas vehicles, and increasingly economical – even without subsidies¹ – with the result that over 60% of new light-duty vehicle sales in the US will be electric by 2050.² Numerous states have conducted EV charging pilots or will do so, including Maryland, District of Columbia, Massachusetts, Utah and Florida. Ambitious plans, like California's 1.5 million vehicle goal, and New York's \$55m for rebates, encourage automakers to produce more models. GM, for example, announced plans this year to increase the number of its all-electric models by 30 in response to international legislative support for EV deployment.

If thorough planning is done in advance, we can transition to new patterns of electric usage without the predicted increased demand causing stress to the grid.

If not, expensive upgrades will be needed. For example, if all electric vehicles start charging about 5 pm, additional distribution capacity will be required which will be paid for by the ratepayers. However, if charging time is spread out through the night (as is possible with current technology), most or all upgrade needs, and consequent costs, could be avoided.

Planning for the growth of EVs depends on our understanding of the habits of EV owners and their response to incentives such as time-of-use rates. Delmarva's proposed program will give the company experience with EVs and allow them to experiment with incentives and technologies to reduce peak load and therefore to reduce the need for expensive upgrades added to the rate base.

One way that Delmarva Power's proposed program could be improved would be to include a small number of fleet vehicles as a test. School buses would be an excellent vehicle for such a test. Each one is a big load, and they have regular, predictable schedules. In addition to learning about managing increased

¹ Bloomberg New Energy Finance, Electric Vehicle Outlook 2017.
https://data.bloomberglp.com/bnef/sites/14/2017/07/BNEF_EVO_2017_ExecutiveSummary.pdf

² Rissman, Jeffrey, The Future Of Electric Vehicles In The U.S., Part 1: 65%-75% New Light-Duty Vehicle Sales By 2050. Forbes. 2017. <https://www.forbes.com/sites/energyinnovation/2017/09/14/the-future-of-electric-vehicles-in-the-u-s-part-1-65-75-new-light-duty-vehicle-sales-by-2050/#522d9ce5e289>



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load, electrifying school bus fleets can ensure that our school children are not breathing diesel fumes on a daily basis while lowering costs to school districts – benefits that could be amplified through a vehicle-to-grid design.³

There has been public discussion and interest in supporting the electrification of school buses in Delaware. Delmarva has also expressed an interest in such a test program. Given this interest, and the benefits of the system, we recommend adding a vehicle-to-grid school bus electrification program to this filing, ideally one that would also allow testing vehicle-to-grid as part of the program.

Thank you.

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³ Noel, Lance and McCormack, Regina. A cost benefit analysis of a V2G-capable electric school bus compared to a traditional diesel school bus. Applied Energy, 2014.